

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局

(43) 国际公布日:

2005年1月27日 (27.01.2005)

(10) 国际公布号:

PCT

WO 2005/009038 A1

- (51) 国际分类号: H04N 7/15
- (21) 国际申请号: PCT/CN2004/000809
- (22) 国际申请日: 2004年7月15日 (15.07.2004)
- (25) 申请语言: 中文
- (26) 公布语言: 中文
- (30) 优先权:
03178396.1 2003年7月19日 (19.07.2003) CN
- (71) 申请人(对除美国以外的所有指定国): 华为技术有限公司(HUAWEI TECHNOLOGIES CO., LTD.) [CN/CN]; 中国广东省深圳市龙岗区坂田华为总部办公楼, Guangdong 518129 (CN).
- (72) 发明人; 及
- (75) 发明人/申请人(仅对美国): 王静(WANG, Jing) [CN/CN]; 汪小荣(WANG, Xiaorong) [CN/CN]; 魏小霞(WEI, Xiaoxia) [CN/CN]; 郭戈(GUO, Ge) [CN/CN]; 中国广东省深圳市龙岗区坂田华为总部办公楼, Guangdong 518129 (CN).
- (74) 代理人: 北京集佳知识产权代理有限公司 (UNITALEN ATTORNEYS AT LAW); 中国北京市朝阳区建国门外大街22号赛特广场7层, Beijing 100004 (CN).

(81) 指定国(除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

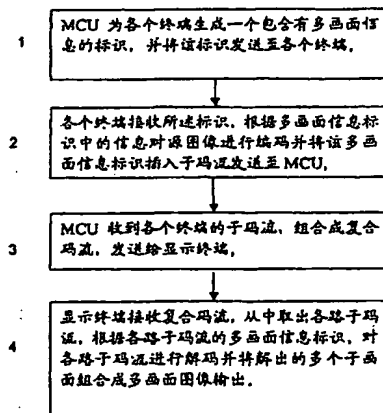
(84) 指定国(除另有指明, 要求每一种可提供的地区保护): ARIPO(BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚专利(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧洲专利(AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

本国际公布:
— 包括国际检索报告。

所引用双字母代码和其它缩写符号, 请参考刊登在每期 PCT公报期刊起始的“代码及缩写符号简要说明”。

(54) Title: METHOD FOR REALIZING MULTI-PICTURE

(54) 发明名称: 一种实现多画面的方法



- 1 MCU GENERATES AN INDICATOR INCLUDING MULTI-PICTURE INFORMATION FOR EACH OF THE TERMINALS
- 2 EACH OF THE TERMINALS RECEIVES SAID INDICATOR, AND ENCODES IMAGES FROM RESPECTIVE RESOURCES ACCORDING TO THE INFORMATION IN THE MULTI-PICTURE INFORMATION INDICATOR, AND INSERTS THE MULTI-PICTURE INFORMATION INDICATOR INTO THE RESULTED SUB-BITSTREAM, AND SENDS THE SUB-BITSTREAM TO THE MCU
- 3 MCU RECEIVES THE SUB-BITSTREAMS FROM RESPECTIVE TERMINALS, AND COMBINES THE SUB-BITSTREAMS INTO A COMPOSITE BITSTREAM, AND SENDS IT TO THE DISPLAY TERMINAL
- 4 THE DISPLAY TERMINAL RECEIVES THE COMPOSITE BITSTREAM, AND EXTRACTS THE RESPECTIVE SUB-BITSTREAMS THEREFROM, AND DECODES THE RESPECTIVE SUB-BITSTREAMS ACCORDING TO THE MULTI-PICTURE INFORMATION INDICATOR OF THE RESPECTIVE SUB-BITSTREAMS, AND COMBINES THE DECODED SUB-PICTURE INTO A MULTI-PICTURE OUTPUT

(57) Abstract: The present invention provides a method for realizing multi-picture, and comprises the following steps: a, MCU (Multipoint Control Unit) generates an indicator including multi-picture information for each of the terminals; b, each of the terminals receives said indicator, and encodes images from respective resources according to the information in the multi-picture information indicator, and inserts the multi-picture information indicator into the resulted sub-bitstream, and sends the sub-bitstream to the MCU; c, the MCU receives the sub-bitstreams from respective terminals, and combines the sub-bitstreams into a composite bitstream, and sends it to a display terminal; d, the display terminal receives the composite bitstream, and extracts the respective sub-bitstreams therefrom, and decodes the respective sub-bitstreams according to the multi-picture information indicator of the respective sub-bitstreams, and combines the decoded sub-pictures into a multi-picture output. The present invention reduces the cost, and extends the capability of multi-picture transmission and combination, therefore realizes transmission and combination of several sub-pictures

[见续页]



(57) 摘要

本发明提出了一种实现多画面的方法，包含以下步骤：a、MCU 为各个终端生成一个包含有多画面信息的标识，并将该标识发送至各个终端；b、各个终端接收所述标识，根据多画面信息标识中的信息对源图像进行编码并将该多画面信息标识插入子码流发送至 MCU；c、MCU 收到各个终端的子码流，组合成复合码流，发送给显示终端；d、显示终端接收复合码流，从中取出各路子码流，根据各路子码流的多画面信息标识，对各路子码流进行解码并将解出的多个子画面组合成多画面图像输出。其既降低了成本，又扩展了多画面传输和组合能力，能够实现多子画面的传输与组合。